HIV Treatment May Offer Only Partial Heart Protection

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Antiretroviral (ARV) therapy has a contradictory effect on the risk of heart disease, according to a study published in the April 15 issue of *The Journal of Infectious Diseases* and reported by aidsmap. While HIV treatment appears to reduce the damaging effects of inflammation on blood vessels, it is also associated with an increased risk of artery-clogging plaques.

There are several known risk factors for cardiovascular disease (CVD), including smoking, diabetes and blood pressure. Less clear are some of the heart disease risks specific to people living with HIV. While research suggests that untreated HIV infection can lead to a buildup of inflammatory proteins that can damage blood vessels and contribute to cardiovascular disease, studies have also repeatedly shown that HIV treatment raises levels of cholesterol in the blood and increases the risk of a heart attack. These contradictory findings often lead to a fundamental question: Do the cardiovascular benefits of ARV therapy outweigh its potential cardiovascular risks?

Marit van Vonderen, MD, from the VU University Medical Center in Amsterdam, and her colleagues examined arterial stiffness and blood vessel functioning in a group of 37 HIV-positive patients from the Metabolic Effects of Different Classes of Antiretrovirals (MEDICLAS) study. All of the patients were male and were followed for 24 months after starting treatment with a Norvir (ritonavir)–boosted Lexiva (fosamprenavir) regimen for the first time.

True to the paradox, Van Vonderen's team found a decrease in one CVD risk factor, but an increase in another. After starting treatment, the thickness of two major arteries increased in both groups of patients, a sign that cholesterol plaques were building up—an acknowledged precursor to heart disease. But there were also improvements in blood tests associated with inflammatory damage to blood vessels, considered to be a reversal of CVD risk.

The authors acknowledge that the small study size and the fact that all subjects were male make it difficult to conclusively determine whether ARV treatment carries more CVD benefits than risks. They encourage larger studies to examine the mixed results they found.

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